

TITLE OF THE INVENTION

NETWORK SYSTEM, CLIENT, SERVER, AND RECORDING
MEDIUM

5 BACKGROUND OF THE INVENTION

Field of the Invention

10 The present invention relates to a network system comprising a client and a server, a client, a server, and a recording medium and, more particularly, to a network system, a client, a server, and a recording medium, in which connection information necessary for connection from a client to a server can be automatically set.

Description of the Related Arts

15 Hitherto, when a file is transferred to a homepage area of the user located on a server of a network and publicized, the user first logs in the server by using an account and a password from a client. At that time, in the case where a homepage is not established yet, 20 prior to the server log-in, the user takes a procedure for establishing the homepage area for an administrator of the server, for example, a network provider. As set information necessary to transfer a file in accordance with a file transfer protocol (FTP protocol), 25 generally, the user sets an FTP server name, an FTP account, an FTP password, and the like notified from the server administrator and executes the file

transfer.

However, it is difficult for the user to understand the procedure for establishing the homepage area and file transfer protocol information such as URL of the homepage, URL of self-creation CGI of the user, FTP server name, FTP account, FTP password, and the like which are preliminarily notified and used for accessing to the network server. To access to the server on the network, however, it is necessary to correctly input such information. Accordingly, there is such a possibility that it takes troublesomeness and time to input and an erroneous input occurs. There is such a problem that when an error occurs, for example, in case of the erroneous input, since an amount of information is large, it is hard to find the error and it is difficult to analyze its causes.

SUMMARY OF THE INVENTION

According to the invention, a network system, a client, a server, and a recording medium, in which a file can be transferred to a homepage area or the like and simply and easily publicized without needing to set information by the user are provided.

(Network system)

According to the invention, there is provided a network system constructed by a client and a server, comprising: a set information obtaining unit which is

provided for the client, requests connection
information to the server by an information obtaining
request using user identification (ID) information, and
sets the connection information which is received as a
5 response; and a set information providing unit which is
provided for the server and transmits the connection
information received from the client and obtained by
using the user ID information to the client. In this
case, the connection information is information which
10 is used when a file is transferred from the client to
the server. If a connection to the network is a dial-
up connection, the set information obtaining unit of
the client obtains the user ID information which is
used for the information obtaining request from the
15 setting input of the dial-up connection. When the
connection to the network is other than the dial-up
connection, the set information obtaining unit of the
client uses the user ID information inputted from the
user as an information obtaining request.
20 Consequently, when there is a setting input of, for
example, the dial-up connection to the server to which
the user has been registered, the user ID information
such as account, password, and the like is obtained
from the setting of the dial-up connection in response
25 to the connecting request of the file transfer of the
user and sent to the server and connection information
such as a file transfer protocol or the like can be

automatically obtained and set. The registered user of the server does not need to set and input the connection information such as a file transfer protocol. The file transfer to establish or update the homepage can be simply and easily performed.

The set information obtaining unit of the client recognizes a fact that the user is a registered user of the server from a set mail address and, after that, issues the information obtaining request using the user ID information. Accordingly, when transferring a file, the user does not need to perform a special operation with respect to the confirmation of the user registration to the server and a fact that he is a server registered user, namely, a subscriber of the provider can be confirmed on the client side from the mail address of the user. The server provides a service for establishing a homepage. When the information obtaining request from the client is received, the server performs an establishing process of the homepage by using the user ID information and, after that, transmits the requested information to the client. Therefore, merely by designating a file to be publicized to the homepage on the client from the user, without needing the operation such as a homepage establishing request or the like to the server, if a homepage is not established yet, a homepage is automatically established on the server side and it is

possible to transfer the file to the homepage and publicize it. When the server receives the information obtaining request from the client, in the case where the homepage corresponding to the user specified by the user ID information is not established yet, the server performs the establishing process. The homepage establishing service of the server is provided to the registered user. The client has a transfer processing unit for transferring the file to the server. When the file is designated and the transmitting operation is performed, the client activates the set information obtaining unit, obtains the connection information from the server, and transfers the file by the transfer processing unit. Between the set information obtaining unit of the client and the connection information providing unit of the server, the obtaining request of the connection information and its response are processed by a protocol having a security function. The user ID information is constructed by an account name and a password.

(Client)

According to the invention, a client which is connected to the server through a network is provided. The client has a set information obtaining unit requests connection information to the server by an information obtaining request using user ID information and sets the connection information which is received

from the server as a response to the request. The connection information is information which is used when the file is transferred from the client to the server. When the connection to the network is a dial-up connection, the set information obtaining unit obtains the user ID information which is used for the information obtaining request from the setting input of the dial-up connection. When the connection to the network is other than the dial-up connection, the set information obtaining unit uses the user ID information inputted from the user as an information obtaining request. The set information obtaining unit recognizes a fact that the user is the registered user of the server from the set mail address and, after that, issues the information obtaining request using the user ID information. The client further has a transfer processing unit which transfers the file to the server. When the file is designated and the transmitting operation is performed, the client activates the set information obtaining unit, obtains the connection information from the server, and transfers the file by the transfer processing unit. The set information obtaining unit processes the reception of the obtaining request and the connection information from the server by a protocol having a security function. The user ID information is constructed by an account name and a password.

(Server)

According to the invention, a server which is connected to a client through a network is provided. The server according to the invention has a set
5 information providing unit which receives the information obtaining request from the client and transmits the connection information that is obtained by using the received user ID information and should be set by the client to the client. The connection
10 information is information which is used when the file is transferred from the client. The server provides a service for establishing a homepage. When the information obtaining request from the client is received, the server performs a process for
15 establishing the homepage by using the user ID information and, after that, transmits the requested information to the client. When the server receives the information obtaining request from the client, in the case where the homepage corresponding to the user
20 specified by the user ID information is not established yet, the server executes the establishing process. The homepage establishing service of the server is provided to the registered user. The set information providing unit of the server processes the reception of the
25 obtaining request from the client and the transmission of the connection information to the client by a protocol having a security function. The user ID

information is constructed by an account name and a password.

(Recording medium)

According to the invention, there is provided a
5 computer-readable recording medium which records a
program (program for a server) for allowing a computer
connected to a server through a network to request
connection information to the server by an information
obtaining request using user identification (ID)
10 information and set the connection information received
from the server as a response to such a request. The
connection information in the recording medium is
information which is used when a file is transferred to
the server. When the computer uses a dial-up
15 connection for the connection to the network, the
program in the recording medium allows the computer to
execute the operation for obtaining the user ID
information which is used for the information obtaining
request from a setting input of the dial-up connection.
20 When the computer uses a connection other than the
dial-up connection for the connection to the network,
the program in the recording medium allows the computer
to execute the operation for using the user ID
information inputted from the user for the information
25 obtaining request. The program in the recording medium
allows the computer to execute the operation for
recognizing a fact that the user is a registered user

of the server from a set mail address and, after that,
issuing the information obtaining request using the
user ID information. When a file is designated and the
transmitting operation is performed, the program in the
5 recording medium allows the computer to execute the
operation for requesting the connection information to
the server, obtaining the connection information
received from the server, and transferring the file.
The program in the recording medium allows the computer
10 to execute the operation for processing the reception
of the obtaining request and the connection information
from the server by a protocol having a security
function. The user ID information is constructed by an
account name and a password.

15 According to the invention, there is provided a
computer-readable recording medium which records a
program (program for a server) for allowing a computer
connected to a client through a network to receive an
information obtaining request from the client, receive
20 user identification (ID) information from the client,
and transmit connection information which is obtained
by using the user ID information and which should be
set by the client to the client. In this case, the
connection information is information which is used
25 when a file is transferred from the client. When a
homepage establishing service is provided through the
computer and the information obtaining request is

received from the client, the program in the recording medium allows the computer to execute the operation for performing a homepage establishing process by using the user ID information and transmit the requested
5 information to the client. When the information obtaining request is received from the client, in the case where a homepage corresponding to the user specified by the user ID information is not established yet, the program in the recording medium allows the
10 computer to execute the operation for performing an establishing process. A homepage establishing service is provided to the registered user. The program in the recording medium allows the computer to execute the operation for processing the reception of the obtaining request from the client and the transmission of the
15 connection information to the client by a protocol having a security function. In this case, the user ID information is constructed by an account name and a password.

20 The invention provides a processing method of a client who is connected to a server through a network, wherein connection information is requested to the server by an information obtaining request using user identification information, and connection information
25 which is received from the server is set as its response.

The invention further provides a processing method

of a server which is connected to a client through a network, comprising the steps of: receiving an information obtaining request from the client; receiving user identification information from the client; and transmitting connecton information that is obtained by using the user identification information and should be set by the client to the client.

The above and other objects, features, and advantages of the present invention will become more apparent from the following detailed description with reference to the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a block diagram of a construction of functions of a client and a server according to the invention;

Figs. 2A and 2B are time charts for processes of the client and server for obtaining FTP connection information according to the invention;

Figs. 3A and 3B are transition explanatory diagrams of a client processing picture plane in case of publicizing a file to a homepage;

Figs. 4A to 4D are transition explanatory diagrams of a client processing picture plane in case of obtaining the FTP connection information according to the invention;

Fig. 5 is an explanatory diagram of the FTP

connection information automatically obtained from the server;

Fig. 6 is a flowchart for the processes of the client in Fig. 1; and

5 Fig. 7 is a flowchart for the processes of the server in Fig. 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Fig. 1 is a block diagram showing a construction of functions of a client and a server in a network system according to the invention. The network system of the invention is constructed by a client 10 and a server 12 which are connected through an Internet 14. A software function for realizing as a provider in which the client 10 is registered as a user and which provides various Internet using services is arranged on the server 12 side. The client 10 has: an https protocol processing unit 16; an FTP (file transfer protocol) processing unit 18; a public file designating unit 20; a set information obtaining unit 22; a dial-up connecting unit 24; and an Email processing unit 26. It will be obviously understood that in addition to them, the client 10 has a function as a WWW browser (not shown). The set information obtaining unit 22 provided for the client 10 is provided for the public file designating unit 20, a homepage processing unit 32, a set information providing unit 34, and a user

information registering unit 36. The client 10 and server 12 are connected by either a dial-up connection via the Internet 14 by modems 15 and 35 or a connection by an LAN 17 using LAN cards 25 and 45 such as Ethernet or the like. In the public file designating unit 20 of the client 10, the user transmits a public file to the server 12 and performs a designation for publicizing it by a homepage. When the user designates the public file and performs the transmitting operation to the public file designating unit 20, the dial-up connecting unit 24 is activated. When the user enters an account name (user ID) and a password, a connection between the https protocol processing unit 16 of the client 10 and an https protocol processing unit 28 of the server 12 is established through the Internet 14. When such a dial-up connection is completed, the set information obtaining unit 22 of the client 10 refers to a mail address in the Email processing unit 26 and recognizes whether the user has been registered as a subscriber of the provider using the server 12 or not from, for example, the mail address such as account, domain, or the like. When it is confirmed that the user has been registered, the client requests the server 12 to obtain connection information by the FTP processing unit 18. At this time, the set information obtaining unit 22 refers to the dial-up connecting unit 24, obtains the account name and password of the user from the setting

input, and transmits an obtaining request of the FTP connection information to the server 12 by adding the account name and password to it. The obtaining request of the FTP connection information from the client 10 is received by the https protocol processing unit 28 of the server 12 and sent to the set information providing unit 34. The set information providing unit 34 checks the account name and password from the client 10 by referring to the user information registering unit 36, thereby confirming that the user who requested to obtain the set information has already been registered as a user. When the password coincides, information necessary for setting the FTP connection information from the client 10 is obtained from an FTP processing unit 30 and provided to the client 10 from the https protocol processing unit 28 through the Internet 14. Information such as account name, password, and the like regarding the user as a subscriber has been registered in the user information registering unit 36 by the provider. When the necessary information is received by the obtaining request to the server 12 as mentioned above, the set information obtaining unit 22 automatically sets the FTP connection information from the obtained information and establishes the connection with the FTP processing unit 30 of the server 12 by the FTP processing unit 18 through the Internet 14. When the connection between the FTP processing units 18 and

30 of the client 10 and server 12 is established through the Internet 14, the public file designated by the user by the file designating unit 20 is transferred to the server 12 in accordance with a file transfer protocol (FTP), received by the FTP processing unit 30,
5 and sent to the homepage processing unit 32. When the set information obtaining request using the account name and password is received from the set information obtaining unit 22 of the client, the set information
10 providing unit 34 of the server 12 refers to the homepage processing unit 32 and discriminates whether a homepage of the user corresponding to the account name has been established or not. If the homepage is not established, the homepage is automatically established
15 and, after that, information for FTP connection newly formed is transmitted from the FTP processing unit 30 to the client 10 side. Therefore, when the client 10 transfers the public file from the FTP processing unit 18 to the server 12 by the automatic setting of the FTP
20 connection information obtained from the server 12, since the server 12 side is in a state where the homepage has already been established, by storing the received public file into a folder corresponding to the homepage which has already been established, the
25 homepage can be publicized at the normal end of the file transfer. Naturally, if the homepage has already been publicized, the homepage is updated by

transferring the file which has the same name and has already been stored in the server 12.

Figs. 2A and 2B are time charts for the processing operation for obtaining the FTP connection information at the time of publicizing a file to the homepage in the network system of Fig. 1. First, in step S1, the client 10 forms a file to be publicized to the homepage of the server 12, for example, an HTML file by an arbitrary application on the client 10. When the file formation is completed, the file to be publicized is designated by the public file designating unit 20 and the transmitting operation is performed in step S2. In response to the designation of the public file and the transmitting operation, in step S3, if the connection of the client 10 to the server 12 is not the LAN connection as shown in Figs. 2A and 2B, the user enters the account name (user ID) and password, executes the dial-up connection by the dial-up connecting unit 24, and establishes the connection between the https protocol processing unit 16 of the client 10 and the https protocol processing unit 28 of the server 12. Subsequently, in step S4, by activating the set information obtaining unit 22, the client requests the server 12 to obtain information necessary for setting the FTP connection information. Further, in step S5, the account name as a user ID and the password are obtained from the setting input of the dial-up

connecting unit 24 and transmitted to the server 12.
For example, assuming that an address of the server 12
is set to "www.aaa.co.jp" and a storing folder of CGI
is set to "cgi-bin", the obtaining request of the FTP
5 connection information to the server 12 in step S4 is
executed as follows. A "GetData.cgi" file is a program
for performing both the transmitting process of the
requested FTP connection information and the homepage
establishing process. First, in step S4, the server
10 having the address "www.aaa.co.jp" is searched,
communication is started by the https protocol, and it
is requested to open the file of "cgi-bin/Getdata.cgi"
in this communicating state. In the server 12, an
instruction to open a "GetData.cgi" file from the
15 client 10 is received, the "GetData.cgi" file is
executed because a file extension is cgi, processes,
which will be explained hereinlater, are executed, and
a processing result is returned to the client 10.
Further, with respect to the transmission of the user
20 ID and password in step S5, it means that a header of
"Authorization:Basic user:password" is additionally
transmitted when it is mentioned as a command. In an
example which will be explained later, "abc123456" is
set as "user" and "aaabbbccc" is set as "password".
25 With respect to a portion of "user:password" in the
additional transmission of the header, a binary format
is once converted (encoded) into a text format and

transmitted, and a decoding for returning it to the original format is performed on the reception side. For example, BASE64 is used as an encoding. In response to the obtaining request of the FTP connection information and the transmission of the user ID and password in steps S4 and S5 in the client 10, the server 12 confirms the user ID and password from the client in step S101. That is, the server 12 refers to the user information registering unit 36, recognizes that the user is a registered subscriber of the provider which manages the server 12 from the account name, and recognizes the coincidence of the password. Subsequently, in step S102, a search of the information necessary for setting the FTP connection information associated with the account name as a user ID is performed to the user information registering unit 36. In step S103, if the homepage is not established yet, the homepage is newly established. In the establishment of the homepage, a folder name unconditionally corresponding to the user is automatically formed. Upon automatic formation of the folder name, a mail address is used or the account name is used and, further, a folder name which does not overlap is formed and its folder information is also stored in the user information registering unit 36. In step S104, user information necessary for setting the FTP connection information is read out from the user

information registering unit 36 and transmitted to the client 10. The client 10 receives the user information from the server 12 and sets the FTP connection information in step S6 and executes the FTP connecting operation in step S7. The client 10 transfers the designated public file to the server 12 in accordance with a file transfer protocol (FTP), stores the file into the server 12 and completes a publicizing preparation in step S105. When the file is stored in the server 12, the client 10 confirms whether the public page can be referred to or not in step S8 in response to the completion of the file storage and finishes the series of file transfer and publicizing processes.

15 Figs. 3A and 3B are explanatory diagrams showing a transition of a processing picture plane on the client 10 side in the transferring process between the client and the server in Figs. 2A and 2B. First, a file public picture plane 40 is opened to designate a file to be publicized. A public file designating column 42 is provided for the file public picture plane 40. In this example, "C:¥My Documents¥aaa.html" is designated as a file name which is publicized. When a SEND button 44 is pressed in such a state where the public file name has been designated, the screen is switched to a next dial-up connecting picture plane 46. In the dial-up connection, the user selects a dial-up connection

set name "aaa" as a connection destination 48, enters,
for example, an account name "abc123456" as a user name
50, and further, enters, "aaabbbccc" as a password 52.
However, it is displayed as "*****" lest the other
5 user finds out the password even if he uses the client.
If the user set and entered the connection destination,
user name, and password with respect to the dial-up
connecting picture plane 46, the dial-up connection is
executed by operating an OK button 54. After that,
10 with respect to the processes in steps S4 to S7 of the
client 10 in Figs. 2A and 2B, a transition picture
plane is not displayed but a next public file transfer
picture plane 56 is displayed and its transfer sequence
is not particularly presented to the user. When the
15 preparation of the file publication on the server
homepage is completed by the file transfer based on
FTP, the screen is switched to a next file publication
completion picture plane 58. By operating an OK button
60, a series of file publicizing processes is finished.

20 Figs. 4A to 4D are explanatory diagrams of a
picture plane transition showing a state where the FTP
connection information is obtained from the FTP
property picture plane. Although Figs. 3A and 3B show
that the automatic obtaining process of the FTP
25 connection information is started by the operation for
transmitting the public file to the server 12, Figs. 4A
to 4D differ from Figs. 3A and 3B with respect to a

point that the automatic obtaining process of the FTP connection information is started by the user setting operation.

A first FTP property picture plane 62 in Figs. 4A to 4D is a processing picture plane for selecting a setting method of the FTP connection information. In case of the subscriber of the provider which manages the server 12 for executing the processes of the invention, a check box corresponding to the provider subscriber between the two check boxes showing the kind of subscriber is selected. By this selection, the provider registered subscriber is confirmed from the mail address or the like. When it is confirmed that the user is the provider registered subscriber, an AUTO GET button 64 can be selected. A DETAILS SET button 66 is a button for displaying the FTP connection information. By selecting the button 66, the FTP connection information which has been set at present as an FTP detailed setting picture plane 70 is displayed. In case of a subscriber of a provider other than the provider which enables the processes of the invention to be executed, it is necessary to select the check box corresponding to the other provider subscriber and perform the operation to manually input the FTP connection information on the FTP detailed setting picture plane 70 which is displayed by operating the DETAILS SET button 66. As shown on the FTP detailed

setting picture plane 70, the FTP set information is not set in the initial state.

When the AUTO GET button 64 is operated on the FTP property picture plane 62, the screen is switched to an FTP connection information obtaining picture plane 88 for displaying a message to promote the start of the automatic getting of the FTP connection information and the confirmation of the subscriber. In case of the subscriber of the provider which enables the processes of the invention to be executed, the automatic obtaining process is started by operating an OK button 89. Under a condition such that the user has been registered on the server 12 side, the obtaining request of the FTP connection information to the server 12 in step S4 in Figs. 3A and 3B and the transmitting process of the user ID and password in step S5 are executed via the Internet. In case of the other provider subscriber or in the case where the user wants to stop the automatic obtaining process, it is sufficient to operate a CANCEL button. Subsequently, the screen is switched to an FTP connection information obtaining execution picture plane 90. After the dial-up connection was executed, the server 12 is requested to obtain the FTP connection information in accordance with the https protocol and the user ID (account name) and password are transmitted. Subsequently, the screen is switched to an FTP connection information obtaining

picture plane 92. In this picture plane state, the user information necessary for setting the FTP connection information is obtained from the server. By pressing an OK button 94, the processes are finished and the screen is switched to the display of the FTP property picture plane 62. By clicking the DETAILS SET button 66 on the FTP property picture plane 62, the information obtained by processes similar to those mentioned above is set and an FTP details setting picture plane 96 is displayed. On the basis of the information obtained from the server, an FTP server name 72, an FTP account name 74, an FTP password 76, a homepage URL 78, a homepage folder name 80, further, a path 82 of perl, a self-creation CGIURL 84, and a self-creation CGI folder 86 are set on the FTP details setting picture plane 96. The path 82 of perl is an input of a path of perl (program language for CGI process) necessary for executing CGI (Common Gateway Interface) by the FTP server. The self-creation CGIURL 84 inputs URL of CGI which is formed by the user. Further, the CGI folder 86 inputs a folder in which the CGI file of the user is put on the FTP server. The set information displayed on the FTP details setting picture plane 96 is extracted from a notice information 95 as a result of the FTP automatic obtaining from the server 12 shown in Fig. 5 and set.

Fig. 6 is a flowchart showing the processing

operation of the set information obtaining unit 22 provided for the client 10 in the network system in Fig. 1. In step S1, when the FTP connecting request from the user is received by the public file

5 designating unit 20 or the like, whether the FTP connection information has been set in the FTP processing unit 18 or not is discriminated in step S2. If it is not set, step S3 follows. The mail address set in the Email processing unit 26 is obtained and

10 whether the client is the subscriber of the provider on the server 12 side corresponding to the FTP information automatic obtaining or not is discriminated from the mail address in step S4. If he is the subscriber registered as a user in the server 12, step S5 follows.

15 Whether the connection to the network is the dial-up connection or the LAN connection is discriminated. If it is the dial-up connection, step S6 follows. The account name and password are obtained from the setting input of the dial-up connection. The FTP connection

20 information is automatically obtained in step S7. That is, as shown in steps S4 and S5 in Figs. 3A and 3B, the server 12 is requested to obtain the FTP connection information, the user ID and password are transmitted, and the information requested from the server 12 is

25 automatically obtained and set to the FTP connection information. When the setting by the automatic obtaining of the FTP connection information is finished

as mentioned above, the FTP connection is made in step S8 and the file to be publicized on the homepage is transferred from the client to the server. The series of client processes is finished. If the FTP connection information has already been set in step S2, the FTP connection is made in step S8 and the file is transferred from the client 10 to the server 12. As a result of obtaining and analyzing the mail address, if the client is not the subscriber registered in the provider which manages the server corresponding to the FTP information automatic obtaining in step S4, the FTP information is manually set in step S10. In the manual setting of the FTP information, specifically speaking, by operating the DETAILS SET button 66 on the FTP property picture plane 62 in Figs. 4A and 4B, the next FTP detailed setting picture plane 70 is opened and the user manually enters the necessary connection information thereto. Further, if the connection to the network is not the dial-up connection but the LAN connection in step S5, step S11 follows. The user enters the account name and password to the LAN connecting picture plane, so that the processing routine advances to step S7. The FTP connection information is automatically obtained by using those input information. The file transfer by the FTP connection is performed in step S8.

Fig. 7 is a flowchart showing the processing

operation of the set information providing unit 34
provided for the server 12 in the network system of
Fig. 1. When the request for obtaining the information
is received from the client 10 in step S1, the user ID
5 and password are received in step S2. Whether the user
of the designated user ID exists or not is
discriminated with reference to the user information
registering unit 36 in step S3. If it is determined
that the user of the designated user ID exists, step S4
10 follows and whether the password coincides or not is
discriminated. If the password coincides, whether the
user who requested to obtain the information has
established the homepage or not is discriminated in
step S5. If he does not establish the homepage yet,
15 step S6 follows and the homepage is automatically
established. If he already has established the
homepage, the process in step S6 is skipped. Finally,
the FTP connection information is transmitted to the
client in step S7. If the user of the designated user
20 ID does not exist in step S3, an error is transmitted
in step S8. An error is transmitted in step S9 even in
the case where the password does not coincide in step
S4.

Each of the client 10 and server 12 for executing
25 the processes of the invention described above uses a
well-known hardware construction of the computer. That
is, a CPU, a main storage device (RAM), an auxiliary

storage device (hard disk or other external storage devices), and a communication control apparatus such as modem, LAN card, etc. are provided as main component elements and connected by a system bus so as to enable
5 information to be transmitted and received between the component elements. In the client 10, a display is connected to the computer, a picture plane is displayed, input devices such as mouse, keyboard, and the like are connected, and the user operation for the
10 picture plane displayed on the display is executed. In the server 12, the display and keyboard are not the indispensable components. In order to install the program of the invention recorded in a portable recording medium such as CD-ROM, floppy disk, or the
15 like into the computer or in order to directly execute such a program, the client 10 and server 12 can be equipped with drives which correspond to the recording medium and are used for reading out the information from the portable recording medium. Further, it is
20 also possible to obtain the program of the invention by a method whereby the program is recorded into a recording medium of another apparatus which is connected through the network and it is downloaded and obtained by using a communication control apparatus and
25 stored in an auxiliary storage device or main storage device of the self apparatus. In the foregoing computer construction, the program of the invention

recorded in the auxiliary storage device, portable recording medium, or another apparatus receives an instruction to execute or is downloaded from another apparatus and developed in the main storage device. By
5 allowing the CPU to execute the processes of the invention, the client 10 and server 12 are made operative as each of the processing units which have already been described.

According to the invention as mentioned above, the
10 client requests for the connection information from the server by the information obtaining request using the user ID information and the connection information which is received is set as its response, so that the connection information necessary for connecting from
15 the client to the server can be automatically set. The file can be transferred to the homepage area or the like and simply and easily publicized. It is, particularly, troublesome for the user to obtain the information necessary for connecting the client to the
20 server. When the obtained information is set and inputted, if an erroneous input is performed, troublesomeness occurs and time is required. According to the invention, however, the process regarding the setting of the information necessary for connecting to
25 the server is substantially unnecessary. The file can be extremely simply and easily transferred from the client to the homepage area or the like of the server

and publicized.

The invention is not limited to the foregoing embodiment but incorporates many modifications and variations without losing the objects and advantages of the invention. The invention is not limited by the numerical values shown in the above embodiment.

100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000